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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,175	02/26/2004	Lee Desmond Capper	ATOTP0109US	9900
<div>7590 Thomas W. Adams Renner, Otto, Boisselle &amp; Sklar, LLP Nineteenth Floor 1621 Euclid Avenue Cleveland, OH 44115-2191</div>			<div>EXAMINER SHEEHAN, JOHN P</div>	
			<div>ART UNIT 1742</div>	<div>PAPER NUMBER</div>
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
31 DAYS		12/19/2006	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/789,175	<b>Applicant(s)</b> CAPPER ET AL.	
	<b>Examiner</b> John P. Sheehan	<b>Art Unit</b> 1742	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-44 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1 to 10, 43 and 44, drawn to an electroplating bath comprising zinc ions, nickel ions, and one or more ionic species selected from  $\text{Te}^{+4}$ ,  $\text{Bi}^{+3}$  and  $\text{Sb}^{+3}$ , with the proviso that when the ionic species comprises  $\text{Te}^{+4}$ , the bath further comprises one or more ionic species selected from the ions of  $\text{Bi}^{+3}$ ,  $\text{Sb}^{+3}$ ,  $\text{Ag}^{+1}$ ,  $\text{Cd}^{+2}$ ,  $\text{Co}^{+2}$ ,  $\text{Cr}^{+3}$ ,  $\text{Cu}^{+2}$ ,  $\text{Fe}^{+2}$ ,  $\text{In}^{+3}$ ,  $\text{Mn}^{+2}$ ,  $\text{Mo}^{+6}$ ,  $\text{P}^{+3}$ ,  $\text{Sn}^{+3}$  and  $\text{W}^{+6}$ , classified in class 106, subclass 127.
  - II. Claims 11 to 33, drawn to an apparatus comprising a electroplating cell, an anode, a cathode comprising the substrate to be electroplated and a source of power operably connected to the cathode and the anode, classified in class 204, subclass 252.
  - III. Claims 34 to 36, drawn to an alloy comprising zinc, nickel, and one or more ionic species selected from Te, Bi and Sb, with the proviso that when the alloy comprises Te, the alloy further comprises one or more additional elements selected from the ions of Bi, Sb, Ag, Cd, Co, Cr, Cu, Fe, In, Mn, Mo, P, Sn and W classified in class 420, subclass 580.
  - IV. Claims 37 to 42, drawn to a process for forming a zinc-nickel ternary or higher alloy comprising immersing a substrate in a bath comprising zinc ions, nickel ions, and one or more ionic species selected from  $\text{Te}^{+4}$ ,  $\text{Bi}^{+3}$

and  $\text{Sb}^{+3}$ , with the proviso that when the ionic species comprises  $\text{Te}^{+4}$ , the bath further comprises one or more ionic species selected from the ions of  $\text{Bi}^{+3}$ ,  $\text{Sb}^{+3}$ ,  $\text{Ag}^{+1}$ ,  $\text{Cd}^{+2}$ ,  $\text{Co}^{+2}$ ,  $\text{Cr}^{+3}$ ,  $\text{Cu}^{+2}$ ,  $\text{Fe}^{+2}$ ,  $\text{In}^{+3}$ ,  $\text{Mn}^{+2}$ ,  $\text{Mo}^{+6}$ ,  $\text{P}^{+3}$ ,  $\text{Sn}^{+3}$  and  $\text{W}^{+6}$  and carrying out an electroplating process, classified in class 205, subclass 246.

The inventions are distinct, each from the other because of the following reasons:

2. The Group I and Group II inventions are distinct in that they are capable of separate manufacture, use, or sale as claimed and are patentable (novel and unobvious) over each other (though they may each be unpatentable because of the prior art), MPEP 802.01. Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.
3. In like manner, the Group I and Group III inventions are distinct in that they are capable of separate manufacture, use, or sale as claimed and are patentable (novel and unobvious) over each other (though they may each be unpatentable because of the prior art), MPEP 802.01. Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the

record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

4. Inventions I and IV are related as composition of matter and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the composition of matter as claimed can be practiced with another materially different the composition of matter or (2) the composition of matter as claimed can be used in a materially different process of using that composition of matter. See MPEP § 806.05(h). In the instant case the bath recited in Group I can be used in a materially different process of use such as for example, in an emersion coating process without the application of electroplating conditions.

5. The Group II and Group III inventions are distinct in that they are capable of separate manufacture, use, or sale as claimed and are patentable (novel and unobvious) over each other (though they may each be unpatentable because of the prior art), MPEP 802.01. Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

6. Inventions II and IV are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be

practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice another and materially different process such as for example immersions coating.

7. Inventions IV and III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process such as for example simply melting and casting the recited alloy components.

8. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification and because the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

9. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

10. The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not

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distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

11. Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

12. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (571) 272-1249. The examiner can normally be reached on T-F (6:45-4:30) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
John P. Sheehan  
Primary Examiner  
Art Unit 1742

Jps